

34. (New) The vector of claim 27, wherein the immunogenic portion is selected from the group consisting of amino acid residues 306-322 or 296-322 of the polypeptide encoded by SEQ ID NO: 110.

35. (New) The vector of claim 27, wherein the immunogenic portion is selected from the group consisting of amino acid residues 181-198 or 296-322 of the polypeptide encoded by SEQ ID NO: 110.

36. (New) The vector of claim 27, wherein the immunogenic portion is selected from the group consisting of amino acid residues 543-553 of the polypeptide encoded by SEQ ID NO: 110.

REMARKS

In reply to the Communication mailed February 26, 2003, favorable consideration of the subject application is respectfully requested. By the above amendment, the BRIEF DESCRIPTION OF THE DRAWINGS section of the specification has been amended, as requested by the Examiner, to identify the SEQ ID NOs: for sequences depicted in Figures 8, 9 and 11. Applicants respectfully submit that the above-identified application is in compliance with the sequence disclosure requirements of 37 C.F.R. §§ 1.821-1.825 and request that Examiner proceed with an examination based on the merits of this application.

Also by the above amendment, non-elected claims 2, 5-10 and 12-17 have been cancelled, claims 1 and 11 have been amended, and new claims 18-36 have been added. Support for the above amendments can be found throughout the specification as originally filed. No new matter has been added. For example, support for new claims 18-19 and 28-29, drawn to viral vectors, can be found at page 76, lines 20-28, page 93, line 8 to page 95, line 29, page 101, line 18 to page 102, line 5, and elsewhere. Support for new claims 20 and 30, drawn to illustrative CTL immunogenic portions encoded by the polynucleotide sequence of SEQ ID NO: 110 can be found in Example 12, at page 154, lines 12-24. Support for new claims 21 and 31, drawn to additional illustrative CTL immunogenic portions encoded by SEQ ID NO: 110, can be found in Example 12 at page 154, line 12 to page 155, line 2, and at page 156, line 17 to page 157, line 8. Support for new claims 22 and 32, drawn to illustrative CD4 immunogenic portions encoded by SEQ ID NO:

110, can be found in Example 12 at page 158, line 19 to page 159, line 20, and in SEQ ID NOs: 860-862. Support for new claims 23 and 33, drawn to illustrative antibody immunogenic portions encoded by SEQ ID NO: 110, can be found in Example 18(b) at page 185, lines 1-18. Support for new claims 24 and 34, drawn to illustrative antibody immunogenic portions encoded by SEQ ID NO: 110, can be found in Example 19 at page 192, lines 21-24, at page 193, line 25 to page 194, line 2, and in SEQ ID NOs: 519 and 520. Support for new claims 25 and 35, drawn to additional illustrative antibody immunogenic portions encoded by SEQ ID NO: 110, can be found in Example 19 at page 194, lines 3-20. Support for new claims 26 and 36, drawn to additional illustrative antibody immunogenic portions encoded by SEQ ID NO: 110, can be found in Example 19 at page 194, lines 3-20.

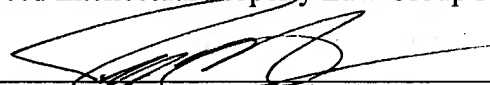
Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The first of the attached pages is captioned "**Version with Markings to Show Changes Made.**"

The Examiner is invited to contact the undersigned at (206) 694-4885 with any questions, comments and/or suggestions relating to this matter.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

Paragraph beginning at page 10, line 10, has been amended as follows:

Figure 8 illustrates the results of epitope mapping studies on P501S. The peptides used in the study are shown from left to right at the bottom of the figure, as follows: MDRLVQRPQTRAVYLA¹SV²A (SEQ ID NO: 489), YLASVAAFPVAAGATCLSHS (SEQ ID NO: 490), TCLSHSVAVVTASAALTGFT (SEQ ID NO: 491), ALTGFTFSALQILPYTLASL (SEQ ID NO: 492), YTLASLYHREKQVFLPKYRG (SEQ ID NO: 493), LPKYRGDTGGASSED³SLM⁴IS (SEQ ID NO: 494), DSLMT⁵TSFLPGPKPGAPFPNG (SEQ ID NO: 495), APFPNGHVGAGGSGLLPPPPA (SEQ ID NO: 496), LLPPPPALCGASACDVSVRV (SEQ ID NO: 497), DVSVRVVVGEPT⁶EARVVPGR (SEQ ID NO: 498), RVVPGRGICLDLAILDSAFL (SEQ ID NO: 499), LDSAFLLSQVAPSLFMGSIV (SEQ ID NO: 500), FMGSIVOLSQSVTAYMVSA⁷A (SEQ ID NO: 501).

Paragraph beginning at page 10, line 11, has been amended as follows:

Figure 9 is a schematic representation of the P501S protein (SEQ ID NO: 113) showing the location of transmembrane domains and predicted intracellular and extracellular domains.

Paragraph beginning at page 10, line 16, has been amended as follows:

Figure 11 shows the results of an ELISA assay to determine the specificity of rabbit polyclonal antisera raised against P501S. The depicted sequence corresponding to peptide P501S 306-320 is set forth in SEQ ID NO: 519 and the sequence corresponding to P501S 296-320 is set forth in SEQ ID NO: 520.

In the Claims:

Non-elected claims 2, 5-10 and 12-17 have been cancelled.

New claims 18-36 have been added.

Claims 1 and 11 have been amended as follows:

1. An isolated polynucleotide ~~comprising encoding~~ at least an immunogenic portion of the polypeptide encoded by SEQ ID NO: 110.

~~a sequence selected from the group consisting of:~~

(a) ~~sequences provided in SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-705, 709-774, 777, 789, 817, 823, 824, 878, 880-882, 894, 896, 907, 908, 916-919 and 929-931;~~

(b) ~~complements of the sequences provided in SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-705, 709-774, 777, 789, 817, 823, 824, 878, 880-882, 894, 896, 907, 908, 916-919 and 929-931;~~

(c) ~~sequences consisting of at least 20 contiguous residues of a sequence provided in SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-705, 709-774, 777, 789, 817, 823, 824, 878, 880-882, 894, 896, 907, 908, 916-919 and 929-931;~~

(d) ~~sequences that hybridize to a sequence provided in SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-705, 709-774, 777, 789, 817, 823, 824, 878, 880-882, 894, 896, 907, 908, 916-919 and 929-931 under moderately stringent conditions;~~

(e) ~~sequences having at least 75% identity to a sequence of SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-705, 709-774, 777, 789, 817, 823, 824, 878, 880-882, 894, 896, 907, 908, 916-919 and 929-931;~~

(f) ~~sequences having at least 90% identity to a sequence of SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-705, 709-774, 777, 789, 817, 823, 824, 878, 880-882, 894, 896, 907, 908, 916-919 and 929-931; and~~

~~(g) — degenerate variants of a sequence provided in SEQ ID NO: 1 111, 115 171, 173 175, 177, 179 305, 307 315, 326, 328, 330, 332 335, 340 375, 381, 382 and 384 476, 524, 526, 530, 531, 533, 535, 536, 552, 569 572, 587, 591, 593 606, 618 705, 709 774, 777, 789, 817, 823, 824, 878, 880 882, 894, 896, 907, 908, 916 919 and 929 931.~~

11. A composition comprising a first component selected from the group consisting of physiologically acceptable carriers and immunostimulants, and a second component selected from the group consisting of a polynucleotide according to claim 1 or an expression vector according to claim 3. ~~and a second component selected from the group consisting of:~~

- ~~(a) — polypeptides according to claim 2;~~
- ~~(b) — polynucleotides according to claim 1;~~
- ~~(c) — antibodies according to claim 5;~~
- ~~(d) — fusion proteins according to claim 7;~~
- ~~(e) — T cell populations according to claim 10; and~~
- ~~(f) — antigen presenting cells that express a polypeptide according to claim 2.~~